Author Index

Abeyaratne, R., 127	Irisawa, T., 185 Iyer, K. J. L., 107	Predel, B., 175
Biberger, M., 93	lyci, R. S. D., 107	D-11-1-1
Blum, W., 93	Jang, B. Z., 157	Radhakrishnan, V. M., 107
Bochniak, W., 151	B, , ,	Ravichandran, G., 79
Bourell, D. L., 67	Kameda, J., 143	Rice, R. W., 215
	Karunanithy, S., 225	
Chang, T. C., 157	Krasnowski, M., 199	Shen, P., 233
Chao, P. T., 233	Kuhn, HA., 117	Shiue, S. T., 59
Chuang, TH., 175	11. 11., 11.	Smith, E., 25
Chung, W. C., 157	Lee, S., 59	Sockel, HG., 117
Clifton, R. J., 79		Soliman, M. S., 21
Colás, R., 49	V - V - 142	Stringfellow, R., 127
, , , , , , , , , , , , , , , , , , , ,	Mao, X., 143	Sundararajan, G., 205
Dutta, I., 67	Margolin, H., 133	Suryanarayanan, V., 107
	Matsumoto, H., 185	
Fournelle, R. A., 175	Mizera, J., 39	Uray, L., 89
	Mukherjee, A. K., 93	
Godse, R., 79	Murakami, K., 185	
Grinberg, A., 49		Vogler, S., 93
Gust, W., 175	Nakahara, S., 43	
Gust, 11.5		Wetherhold, R. C., 31
Han, SK., 133	Okamoto, T., 185	Wilcox, R. C., 157
Hu, C. T., 59		Wyrzykowski, J. W., 39, 199
Hwang, L. R., 157	Pakieła, Z., 199	• • •
Hwang, S. L., 233	Pekárek, V., 193	Yang, C. J., 1, 11
11 waits, 5. L., 255	1 CKaick, v., 195	Tang, C. J., 1, 11

Subject Index

Aging

plastic instability in a stainless steel which exhibits dynamic strain aging, 49

theoretical and experimental study of aluminum alloy 6061-SiC metal matrix composite to identify the operative mechanism for accelerated aging, 67

Alloys

effect of prestrain and recrystallization conditions on the occurrence of the Lüders phenomenon in CuSn2 alloy, 151

hardening and intergranular embrittlement in neutronirradiated ferritic alloys, 143

investigation of the creep behaviour of Pb-9Sn, Zn-40Al and Au-10Ni alloys, 21

theoretical and experimental study of aluminum alloy 6061-SiC metal matrix composite to identify the operative mechanism for accelerated aging, 67

Aluminium

chemical processes that degrade composites of aluminium with SiC whiskers, 225

investigation of the creep behaviour of Pb-9Sn, Zn-40Al and Au-10Ni alloys, 21

spinelloid in sintered Y-PSZ-Ni, AlTi cermet, 233

theoretical and experimental study of aluminum alloy 6061-SiC metal matrix composite to identify the operative mechanism for accelerated aging, 67

Brass

bend ductility of 70-30 alpha brass

I: observations, 1

II: correlation with tensile behavior, 11

Carbon

characterization of flame-sprayed coating layers of high carbon and high silicon irons, 185

chemical processes that degrade composites of alumina with SiC whiskers, 225

theoretical and experimental study of aluminum alloy 6061-SiC metal matrix composite to identify the operative mechanism for accelerated aging, 67

void formation, void growth and tensile fracture of plain carbon steel and a dual-phase steel, 133

Cavitation

cavitation in an elastomer: comparison of theory with experiment, 127

Ceramics

relation of tensile strength-porosity effects in ceramics to porosity dependence of Young's modulus and fracture energy, porosity character and grain size, 215

Cermets

spinelloid in sintered Y-PSZ-Ni₂AlTi cermet, 233

Coarsening

discontinuous coarsening and dissolution in an Fe-13.5at.%Zn solid solution, 175

Composites

chemical processes that degrade composites of alumina with SiC whiskers, 225

elastic analysis of screw dislocations and a welded surface crack in a thin plate of composite material, 59

energy of fracture for short brittle fiber-brittle matrix composites with planar fiber orientation, 31

fracture behavior in stitched multidirectional composites,

theoretical and experimental study of aluminum alloy 6061-SiC metal matrix composite to identify the operative mechanism for accelerated aging, 67

Copper

effect of prestrain and recrystallization conditions on the occurrence of the Lüders phenomenon in CuSn2 alloy,

Corrosion

interaction of low temperature hot corrosion and creep, 107

Crack propagation

micromechanisms of dynamic crack propagation in an AISI 4340 steel, 79

Cracking

crack extension in a material with a J-shaped stress-strain curve, 25

effect of cracks on torsion of tungsten wires, 89

elastic analysis of screw dislocations and a welded surface crack in a thin plate of composite material, 59

Creep

interaction of low temperature hot corrosion and creep, 107

investigation of the creep behaviour of Pb-9Sn, Zn-40Al and Au-10Ni alloys, 21

stress dependence of the creep rate at constant dislocation structure, 93

Dislocations

elastic analysis of screw dislocations and a welded surface crack in a thin plate of composite material, 59

formulations of van der Merwe misfit dislocation theory using a continuous distribution of infinitesimal interface dislocations, 43

stress dependence of the creep rate at constant dislocation structure, 93

Dissolution

discontinuous coarsening and dissolution in an Fe-13.5at.%Zn solid solution, 175

Ductility

bend ductility of 70-30 alpha brass

I: observations, 1

II: correlation with tensile behavior, 11

Elastic parameters

relation between elastic and heat parameters in metal, 193

Elastomers

cavitation in an elastomer: comparison of theory with experiment, 127

Embrittlement

hardening and intergranular embrittlement in neutronirradiated ferritic alloys, 143

Flame spraying

characterization of flame-sprayed coating layers of high carbon and high silicon irons, 185

Fracture

energy of fracture for short brittle fiber-brittle matrix composites with planar fiber orientation, 31

fracture behavior in stitched multidirectional composites, 157

relation of tensile strength-porosity effects in ceramics to porosity dependence of Young's modulus and fracture energy, porosity character and grain size, 215

void formation, void growth and tensile fracture of plain carbon steel and a dual-phase steel, 133

Gold

investigation of the creep behaviour of Pb-9Sn, Zn-40Al and Au-10Ni alloys, 21

Grain boundaries

changes in distributions of grain boundary diffusion properties after grain growth in austenitic steel, 199

Grain growth

changes in distributions of grain boundary diffusion properties after grain growth in austenitic steel, 199

Grain size

relation of tensile strength-porosity effects in ceramics to porosity dependence of Young's modulus and fracture energy, porosity character and grain size, 215

Hardening

hardening and intergranular embrittlement in neutronirradiated ferritic alloys, 143

Heat parameters

relation between elastic and heat parameters in metal, 193

Iron

characterization of flame-sprayed coating layers of high carbon and high silicon irons, 185

discontinuous coarsening and dissolution in an Fe-13.5at.%Zn solid solution, 175

Lead

investigation of the creep behaviour of Pb-9Sn, Zn-40Al and Au-10Ni alloys, 21

Lüders phenomenon

effect of prestrain and recrystallization conditions on the occurrence of the Lüders phenomenon in CuSn2 alloy, 151

Mechanical properties

analysis of the effect of twin boundaries on mechanical properties of austenitic steel, 39

Monkman-Grant relationship

Monkman-Grant relationship, 205

Nickel

elastic properties of textured and directionally solidified nickel-based superalloys between 25 and 1200 °C, 117 investigation of the creep behaviour of Pb-9Sn, Zn-40Al and Au-10Ni alloys, 21 spinelloid in sintered Y-PSZ-Ni₂AlTi cermet, 233

Oxvgen

chemical processes that degrade composites of alumina with SiC whiskers, 225

Porosity

relation of tensile strength-porosity effects in ceramics to porosity dependence of Young's modulus and fracture energy, porosity character and grain size, 215

Prestrair

effect of prestrain and recrystallization conditions on the occurrence of the Lüders phenomenon in CuSn2 alloy, 151

Recrystallization

effect of prestrain and recrystallization conditions on the occurrence of the Lüders phenomenon in CuSn2 alloy, 151

Silicon

characterization of flame-sprayed coating layers of high carbon and high silicon irons, 185

chemical processes that degrade composites of alumina with SiC whiskers, 225

theoretical and experimental study of aluminum alloy 6061-SiC metal matrix composite to identify the operative mechanism for accelerated aging, 67

Spinelloid

spinelloid in sintered Y-PSZ-Ni₂AlTi cermet, 233

Stainless steel

plastic instability in a stainless steel which exhibits dynamic strain aging, 49

Steels

analysis of the effect of twin boundaries on mechanical properties of austenitic steel, 39

changes in distributions of grain boundary diffusion properties after grain growth in austenitic steel, 199

micromechanisms of dynamic crack propagation in an AISI 4340 steel, 79

void formation, void growth and tensile fracture of plain carbon steel and a dual-phase steel, 133

Strain

crack extension in a material with a J-shaped stress-strain curve, 25

plastic instability in a stainless steel which exhibits dynamic strain aging, 49

Stres

crack extension in a material with a J-shaped stress-strain curve, 25

stress dependence of the creep rate at constant dislocation structure, 93

Superalloys

elastic properties of textured and directionally solidified nickel-based superalloys between 25 and 1200 °C, 117

Tensile behavior

bend ductility of 70-30 alpha brass

II: correlation with tensile behavior, 11

Tensile strength

relation of tensile strength-porosity effects in ceramics to porosity dependence of Young's modulus and fracture energy, porosity character and grain size, 215

Tin

effect of prestrain and recrystallization conditions on the occurrence of the Lüders phenomenon in CuSn2 alloy, 151

investigation of the creep behaviour of Pb-9Sn, Zn-40Al and Au-10Ni alloys, 21

Titanium

spinelloid in sintered Y-PSZ-Ni₂AlTi cermet, 233

Torsion

effect of cracks on torsion of tungsten wires, 89

Tungsten

effect of cracks on torsion of tungsten wires, 89

Twin boundaries

analysis of the effect of twin boundaries on mechanical properties of austenitic steel, 39

Void

void formation, void growth and tensile fracture of plain carbon steel and a dual-phase steel, 133

Y-PSZ

spinelloid in sintered Y-PSZ-Ni₂AlTi cermet, 233

Young's Modulus

relation of tensile strength-porosity effects in ceramics to porosity dependence of Young's modulus and fracture energy, porosity character and grain size, 215

Zinc

discontinuous coarsening and dissolution in an Fe-13.5at.%Zn solid solution, 175

investigation of the creep behaviour of Pb-9Sn, Zn-40Al and Au-10Ni alloys, 21

